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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,881	10/14/2003	Jac-Yeon Song	5000-1-499	4860
33942	7590	09/20/2007		
CHA & REITER, LLC 210 ROUTE 4 EAST STE 103 PARAMUS, NJ 07652			EXAMINER TRAN, DZUNG D	
			ART UNIT 2613	PAPER NUMBER
			MAIL DATE 09/20/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/684,881	<b>Applicant(s)</b> SONG ET AL.	
	<b>Examiner</b> Dzung D. Tran	<b>Art Unit</b> 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 10 and 11 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Specification***

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Unitt et al. U.S. Publication no. 2005/01631492 in view of Dreyer et al. US Patent no. 6,098,103.

Regarding claims 1 and 4, Unitt discloses in Figure 11, a method/apparatus of a MAC (Medium Access Control) control block for controlling transmission of data between a plurality of MAC clients and a plurality of MACs in an Ethernet passive optical network (EPON), comprising:

a plurality of optical multipoint (OMP) blocks 126 (e.g., Outstation 12) connected between the MAC clients and the MACs for implementing a multipoint control protocol (MPCP) (page 9, paragraphs 0131-0134); and

head end medium access logic 116 (e.g., equivalent to a multipoint gating control block) configured to receive transmission in progress state variable from the OMP blocks connected to their associated MAC clients, to determine transmission states of the MAC clients with the received transmission in progress state variable, and to selectively controlling the OMP blocks so that when any one of the OMP blocks is

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transmitting the data, the other OMP blocks are prevented from transmitting data (page 2, paragraphs 0029, 0039; page 4, paragraphs 0058, 0064; page 5, paragraph 0089).

Unitt does not specifically disclose the transmission in progress state variable indicates whether a corresponding MAC client is transmitting data or not. Dreyer, from the same field of endeavor, discloses an automatic MAC control frame generating apparatus for LAN flow control comprise a flow control signal (i.e., equivalent to transmission in progress state variable) having MAC control frame that indicated whether a corresponding MAC client is transmitting data or not (col. 9, lines 37-58; col. 13, lines 15-55). At the time of the invention was made, it would have been obvious to an artisan to include the flow control signal (i.e., equivalent to transmission in progress state variable) having MAC control frame for controlling the data signal taught by Dreyer in the apparatus of Unitt. One of ordinary skill in the art would have been motivated to do that in order to control the transmission of the data signal in the optical network. Thus, it improves system reliability (i.e., reduce signal collision etc...).

Regarding claim 2, Unitt discloses the multipoint gating control block is configured to control data transmission by the MAC clients by providing transmission enable state variables to the OMP blocks connected to their associated MAC clients (page 2, paragraph 0029; page 4, paragraphs 0058, 0064).

Regarding claims 3 and 5, Unitt discloses wherein the head end medium access logic 116 (e.g., equivalent to a multipoint gating control block) determines a value of a transmission enable state variable by driving a timer indicating a transmission start

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time and a transmission stop time and provides a transmission opportunity by delivering the value to a corresponding

OMP block (page 2, paragraph 0029; page 4, paragraphs 0058, 0064; page 5, paragraph 0089).

3. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Unitt et al. U.S. Publication no. 2005/01631492 in view of Dreyer et al. US Patent no. 6,098,103 and further in view of Counterman US Patent no. 5,648,958.

Regarding claims 8 and 9, the combination of Unitt and Dreyer discloses all the limitation except for the MAC is a virtual MAC. Counterman discloses virtual MAC (col. 4, lines 63-67; col. 6, lines 1-4. At the time of the invention was made, it would have been obvious to an artisan to include the virtual MAC taught by Counterman in the apparatus of Unitt and Dreyer. One of ordinary skill in the art would have been motivated to do that for controlling and management the transmission of the data signal in the optical network (col. 6, lines 1-4 of Counterman).

Claims 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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**Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dzung D Tran whose telephone number is (571) 272-3025. The examiner can normally be reached on 9:00 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dzung Tran  
09/15/2007



DZUNG TRAN  
PRIMARY PATENT EXAMINER